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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/078,768	06/16/93	TULLIS	R PMB9658

EXAMINER	
MARTINELL, J	

ART UNIT	PAPER NUMBER
1805	26

18N2/0222
TOWNSEND & TOWNSEND, KHOURIE & CREW
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SAN FRANCISCO, CA 94105

DATE MAILED: 02/22/94

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 10/18/93 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), ~~days~~ from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☐ Notice of References Cited by Examiner, PTO-892.
2. ☐ Notice of Draftsman's Patent Drawing Review, PTO-948.
3. ☒ Notice of Art Cited by Applicant, PTO-1449.
4. ☐ Notice of Informal Patent Application, PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.
6. ☐ _____.

Part II SUMMARY OF ACTION

1. ☒ Claims 40-43, 45-47, 49, 51, 52, and 64-72 are pending in the application.

   Of the above, claims 40-43, 45-47, 49, 51, and 52 are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 64-72 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____. has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____.

13. ☐ Since this application apppears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

The amendment filed December 20, 1990 has been entered. However, claims 84-93 of that amendment have been renumbered as claims 53-62 (see 37 CFR 1.126). Additionally, claims 54-60 now each depend from claim 53.

Restriction to one of the following inventions is required under 35 U.S.C. § 121:

I. Claims 40-43, 45-47, 49, 51, and 52, drawn to oligonucleotides, classified in Class 536, subclass 27.

II. Claims 53-62, drawn to methods of making oligonucleotides and methods of inhibiting protein synthesis, classified in Class 435, subclass 91 and Class 514, subclass 44.

The inventions are distinct, each from the other because of the following reasons:

The oligonucleotides of Group I have utility other than the methods of Group II. For example, they may be used in affinity chromatography for th isolation of sequence-specific nucleic acids, or they may be used as templates or primers in the synthesis of nucleic acids.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Ms. Campbell on July 31, 1991 a provisional election was made with traverse to prosecute the invention of Group II, claims 53-62. Affirmation of this election must be made by applicant in responding to this Office action. Claims 40-43, 45-47, 49, 51,

and 52 are withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

The disclosure is objected to because of the following informalities: The status of each of the parent applications must be updated. Appropriate correction is required.

35 U.S.C. § 101 reads as follows:

> "Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title".

Claims 53-60 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are vague, indefinite, and incomplete in the recitation of "more stable" (claims 53 and 54) because this is a relative term and no frame of reference is provided.

Claim 62 is rejected under 35 U.S.C. § 101 as claiming the same inv ntion as that of claim 1 of prior U.S. Patent No. 5,023,243. This is a double patenting rejection.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
>
> Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 53-61 are rejected under 35 U.S.C. § 103 as being unpatentable over Itakura et al in view of either one of Paterson et al or Hastie et al in further view of either one of Summerton or Miller et al. Itakura et al discloses oligonucleotides and teaches methods of producing oligonucleotides. Each of the secondary references teaches hybrid arrested translation using nucleic acid hybridization to prevent ribosomal translation of mRNA. Each of the tertiary references discloses the uptake of oligonucleotides by cells. Additionally, Miller et al teaches the inhibition of cellular protein synth sis du to the binding of oligoribonucleotides to cellular mRNA (e.g.,

see the abstract). Miller et al also teaches the use of long r oligonucleotides to increase the specificity of inhibition (e.g., see page 1995, last paragraph of text). It would be obvious for one of ordinary skill in the art to construct oligodeoxynucleotides using the methods taught by Itakura et al in order to specifically inhibit protein synthesis in a manner similar to that shown by either primary reference in cells as suggested by either tertiary reference.

Claims 53-61 are rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103 as obvious over Ts'o et al ('863). Ts'o et al teaches the specific inhibition of protein synthesis by using oligonucleotides complementary to mRNA (e.g., see columns 24-25). The processes of the claims are deemed to be the same or essentially the same as those of Ts'o et al. Applicant should note that affidavits and declarations, such as those under 37 C.F.R. § 1.131 and 37 C.F.R. § 1.132, filed during prosecution of the parent application do not automatically become a part of this application. Where it is desired to rely on an earlier filed affidavit, the applicant should make the remarks of record in the later application and include a copy of the original affidavit filed in the parent application.

Papers related to this application may be submitted to Group 180 by facsimile transmission. Papers should be faxed to Group 180 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). Th CM1 Fax Center number is (703) 308-4227.

Any inquiry concerning this communication should be directed to J. Martinell at telephone number (703) 308-0196.

Martinell

JAMES MARTINELL, Ph.D.
PRIMARY EXAMINER
ART UNIT 185